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EXAMINER

ATALA, JAMIE JO

ART UNIT

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed January 6, 2010 have been fully considered but they are not persuasive. On page 7-8 applicant argues that the prior art of record fails to disclose, or suggest, the following limitation, "offset holding means for holding an offset equivalent to a time period by which to start encoding an audio signal earlier than a video signal" as recited in Claim 1. It is noted Kelly discloses the limitation in Column 14 Lines 15-20 describes altering the audio from the video from a few seconds prior or after the video for synchronization. The offset of the time period in which the data is encoded is further explained in Column 12 Lines 63+ through Column 13 Lines 1-4 wherein the encoding is based on the synchronization and time period for the video stream encoding. It is noted that the in Column 14 Lines 30+ with special attention given to the following passage regarding offset holding:

(59) Reproducing the edited stream via a built-in decoder, any degree of sophisticated handling is possible in principle. However, to enable playback of simple edits on a standard STB without any disturbing artefacts, the following procedure is implemented by the apparatus of FIG. 1. This includes steps to be performed on playback, and also steps performed in creating the additional data defining the edit.

(60) 1. Only Send Decodable Audio/Video to the STB.

(61) The pointers in the meta-data for the edit are selected to ensure that the first stream will always end before a P- or I-frame (in bit-stream, as opposed to presentation order), while the second stream will always start with an I-frame. Only complete audio frames are sent to the decoder. A gap in audio presentation should be left at the edit point. Unwanted audio packets are removed from the stream by changing the PID of each packet to 0x1FFF indicating a NULL packet. This will not cause a problem with the Continuity Counters because packets will only be deleted immediately before or immediately after the Continuity Counter discontinuity.

(62) 2. Ensure no Buffer Overflow.

Art Unit: 2621

(63) To ensure that no buffer overflow occurs, the buffer status at the edit point should be calculated.

The following algorithm is used, while others are equally possible:

(64) (a) Calculate the buffer fullness $D_{sub}buff$ in the original second stream at the edit point. This can be easily calculated by adding the size of all video frames that precede the edit point but have DTS time after the time of the edit point.

(65) (b) Calculate the buffer fullness $S_{sub}buff$ of the first stream at the edit point. This can be calculated in a similar way to point 1.

(66) (c) If $S_{sub}buff > D_{sub}buff$ then add a frame period to the offset between the streams and adjust the value of $S_{sub}buff$ to the buffer fullness one frame period later than before.

(67) (d) Repeat point 3 until $S_{sub}buff < D_{sub}buff$.

(68) This will ensure that there is no buffer overflow. An alternative approach for Steps (c) and (d) above would be to keep the offset constant in Step (c) but move the edit point in the first stream to exclude the last frame. In practice more than one frame may need to be removed to ensure that the first stream always ends before a P/I frame. In either case the result on playback will be that the last frame from the first stream will be frozen on the display for more than one frames period. Both approaches can be used in combination, which might mitigate the adverse effects each has for user satisfaction.

(69) If editing is done at GOP boundaries, in most cases the buffer fullness at the end of the first stream and the start of the second stream will be similar. Therefore by choosing to edit only at GOP boundaries we can in general reduce the amount by which the offset between the stream is increased and hence reduce the time that a freeze frame appears during playback of the edited sequence. The designer of the apparatus may for this reason decide that only GOP boundaries can be selected by the user. In general, however, the user may have a free choice of edit points, with or without advice from the apparatus as to which are the best choices.

The applicant describes in the arguments that the timestamps are not updated;

however, the above section from Kelly clearly discusses the updating of timestamps, the

holding of the offset based on a time period and further describes the uses of the

timestamps being updated and the data not being loss, as applied by applicant.

Although, applicants points are understood the examiner can not agree and the

rejection is maintained.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMIE JO ATALA whose telephone number is

(571)272-7384. The examiner can normally be reached on 7:30am-5:00pm.

Art Unit: 2621

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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